

Date: Monday, 11/12/2007 11:45:44 AM  
 User: Kim Johnston

## Process Sheet

Customer : CU-DAR001 Dart Helicopters Services Drawing Name : STEP SPACER  
 Job Number : 35616  
 Estimate Number : 10380  
 P.O. Number : N/A Part Number : D30657  
 This Issue : 11/12/2007 S.O. No. : N/A Drawing Number : D3065 REV. B  
 Prsht Rev. : NC Project Number : N/A  
 First Issue : N/A Type : SMALL /MED FAB Drawing Revision : B  
 Previous Run : 33510D Material : NA  
 Due Date : 11/30/2007 Qty: 250 Um: Each  
 Written By :  
 Checked & Approved By : 07.11.12  
 Comment : Est: C 02/11/01 Incorporated D3066-1 IPP KJ/RF  
 Est Rev: D Now on Water Jet 06-04-11 JLM

## Additional Product

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 PG PURCHASING



Comment: ISSUE P.O. 5022

GFI

CUT AND FORM PER DRWG D3065 REV.B

C 207/11/12

(250)

2.0 D30657 Step Spacer



Comment: Qty.: 0.0000 Each(s)/Unit Total : 0.0000 Each(s)

Step Spacer

3.0 PACKAGING 1 PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

RECEIVE AND INSPECT FOR TRANSIT DAMMAGE

ENSURE MATERIAL CERTIFICATION ATTACHED

C 2/12/18

(250)

4.0 QC6 DIMENSIONAL CHECK



Comment: DIMENSIONAL CHECK

QSP019

C 2/12/21

conty

(250)

5.0 HAND FINISHING1 HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

FL/a.m

08/01/02

(250)

**Dart Aerospace Ltd**

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: AD Date: 08/01/04  
 QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

Date: Monday, 11/12/2007 11:45:44 AM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: STEP SPACER

Job Number: 35616

Part Number: D30657

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT CHEMICAL CONVERSION COAT

mf

08-01-03

7.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: GA

mf

08-01-03

(251)

8.0

QC21

FINAL INSPECTION/W/O RELEASE



(251)

Comment: FINAL INSPECTION/W/O RELEASE

20810104

Job Completion



mf 2008/1/4

W

**Dart Aerospace Ltd**

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

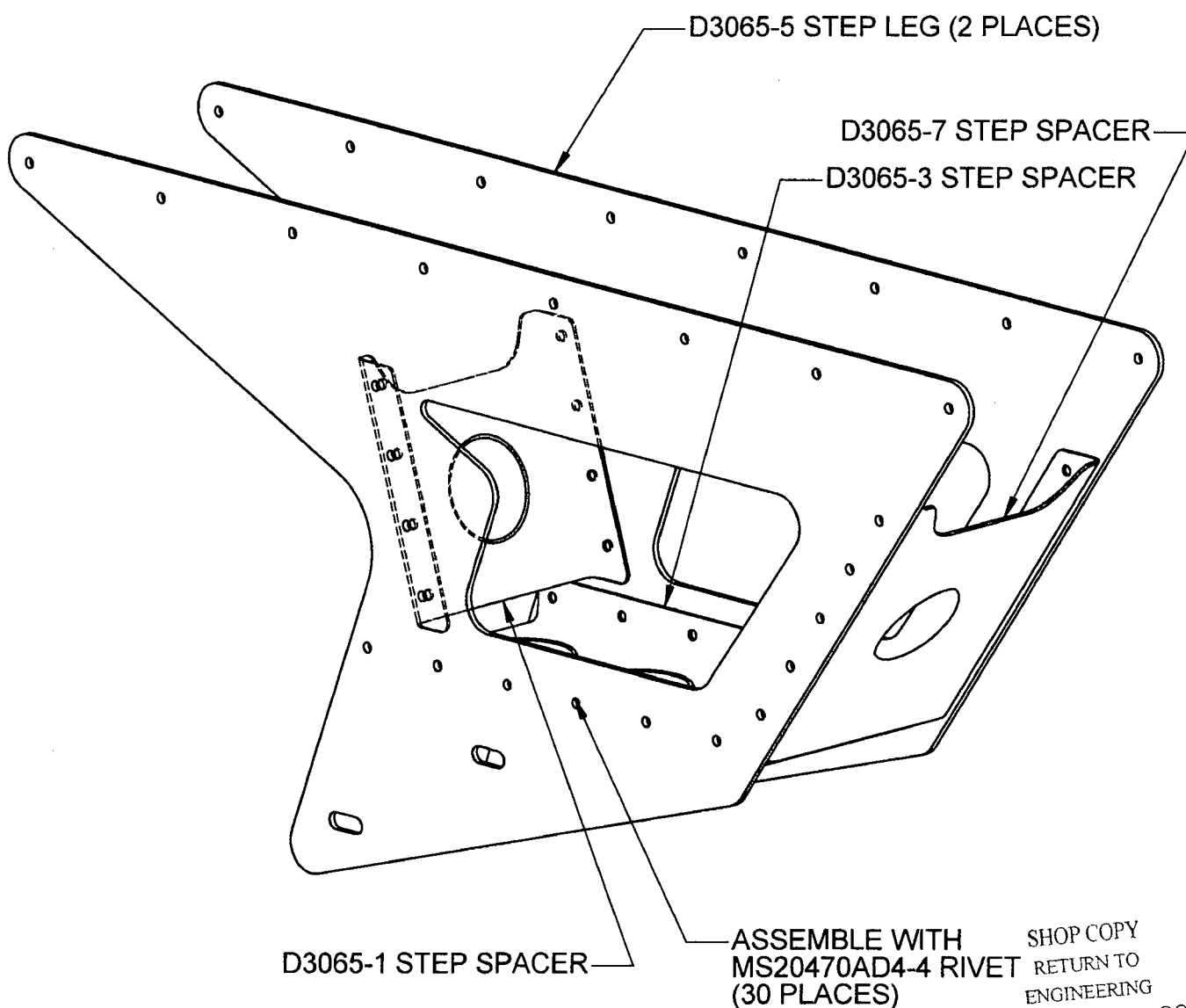




DESIGN <i>CP</i>	DRAWN BY <i>CB</i>	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>PH</i>	APPROVED <i>[Signature]</i>	DRAWING NO. <b>D3065</b>	REV. B SHEET 1 OF 5
DATE <b>06.05.23</b>		TITLE <b>STEP LEG ASSEMBLY</b>	SCALE 1:2
A	02.09.11	NEW ISSUE	
B	06.05.23	ADD 6061-T6 MATERIAL, ADD SLOTS TO D3065-5	

RELEASED

*06.06.20* *[Signature]*

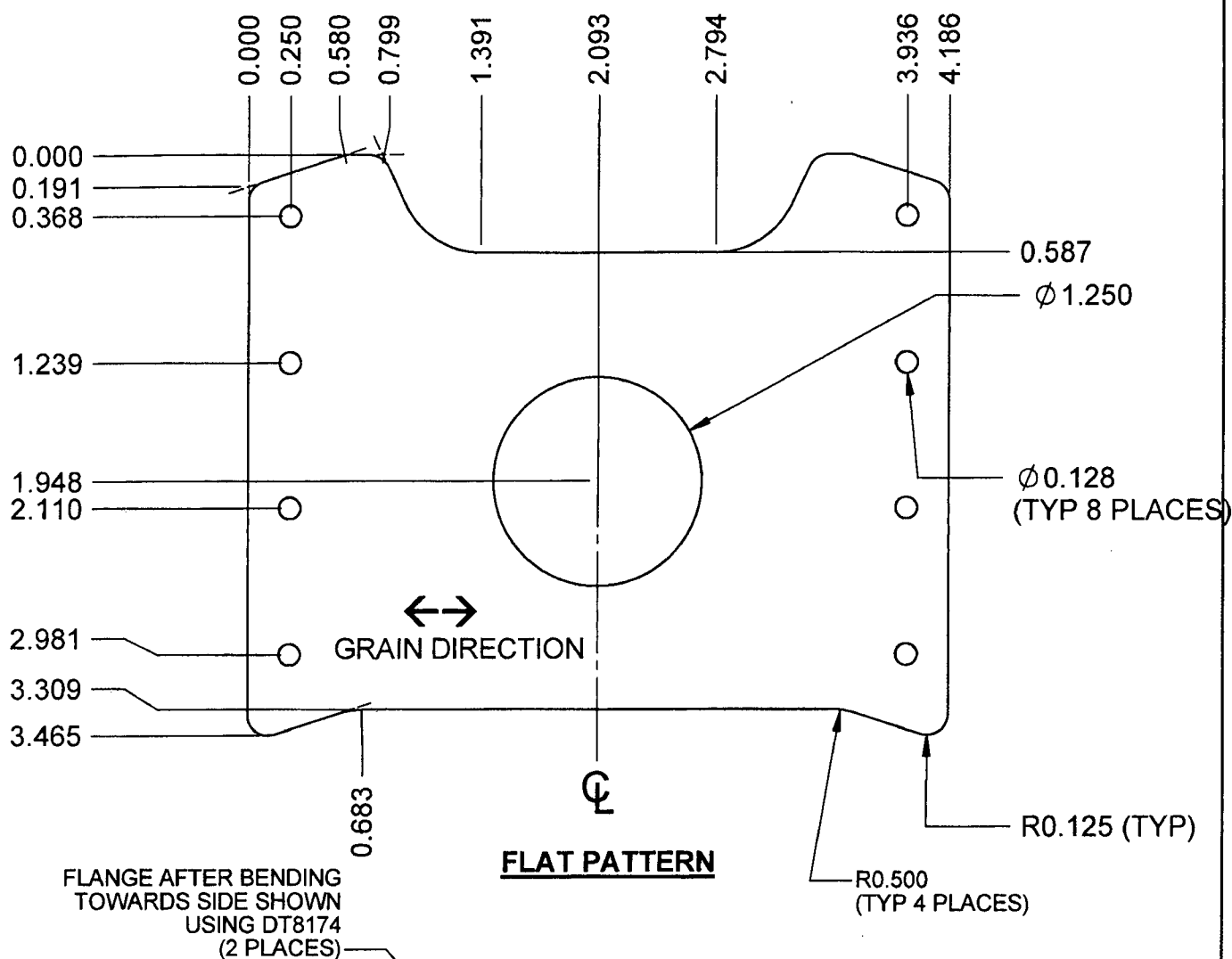


## D3065-041 STEP LEG ASSEMBLY

COPYRIGHT © 2002 BY DART AEROSPACE LTD.

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

DESIGN <i>CP</i>	DRAWN BY <i>CB</i>	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>PH</i>	APPROVED <i>[Signature]</i>	DRAWING NO. <b>D3065</b>	REV. B SHEET 2 OF 5
DATE <b>06.05.23</b>		TITLE <b>STEP LEG ASSEMBLY</b> SCALE <b>1:1</b>	



**RELEASED**

de de-20 #

## D3065-1 STEP SPACER

## BEND DETAIL

- 1) MATERIAL: 2024-T3 (QQ-A-250/4) 0.040 THICK (REF DART SPEC. M2024T3S-040)  
2) FINISH: ACID ETCH & ALODINE PER DART QSI 005 4.1  
3) BREAK ALL SHARP EDGES 0.005 TO 0.010  
4) PART IS SYMMETRIC ABOUT CENTERLINE  
5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED  
6) ALL DIMENSIONS ARE IN INCHES

5 (TYP)  
6-049)

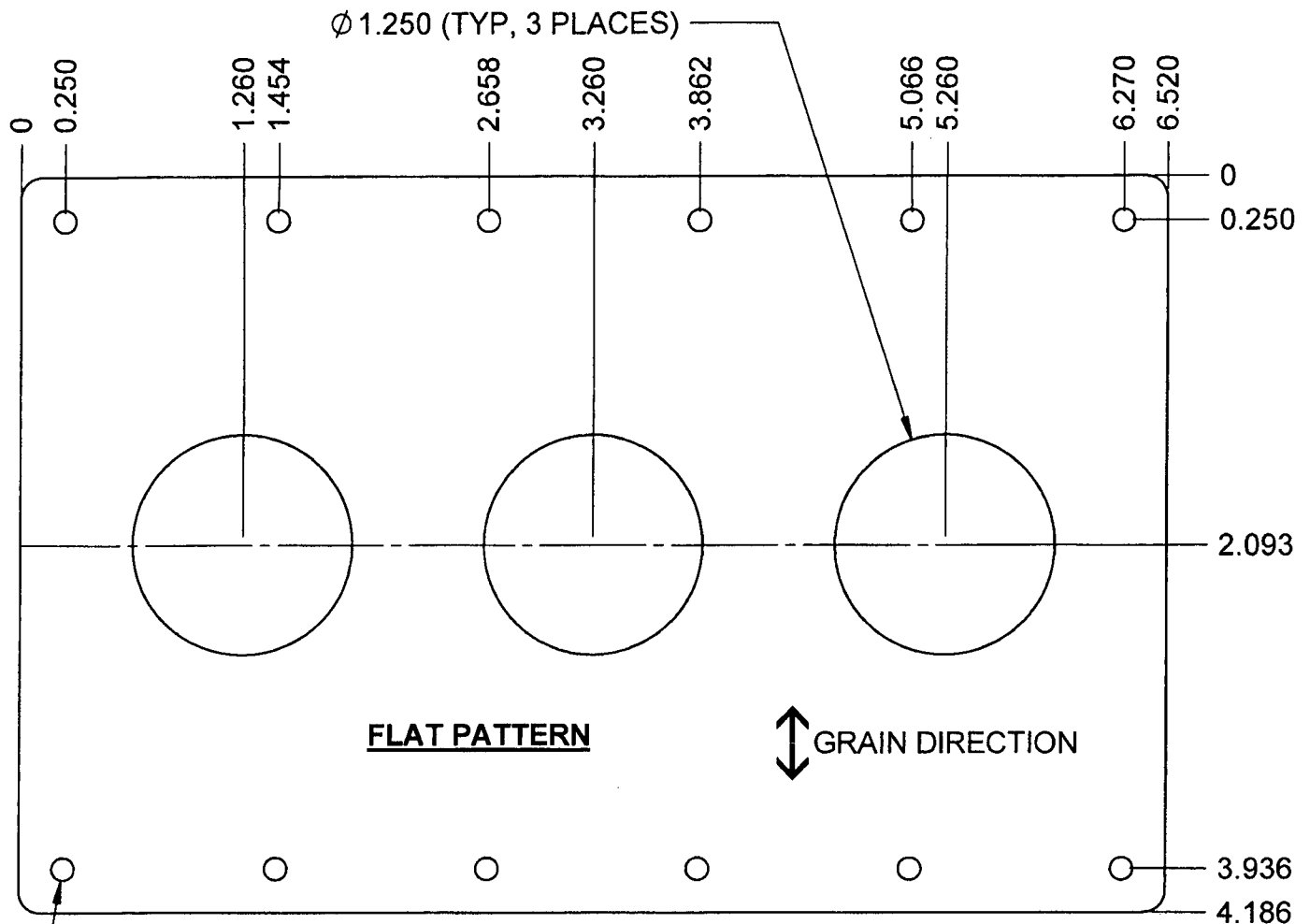
SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 35616

**COPYRIGHT © 2002 BY DART AEROSPACE LTD.**

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

**DART**

DESIGN <i>CP</i>	DRAWN BY <i>CB</i>	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>PH</i>	APPROVED <i>[Signature]</i>	DRAWING NO. <b>D3065</b>	REV. B SHEET 3 OF 5
DATE <b>06.05.23</b>		TITLE <b>STEP LEG ASSEMBLY</b>	SCALE 1:1

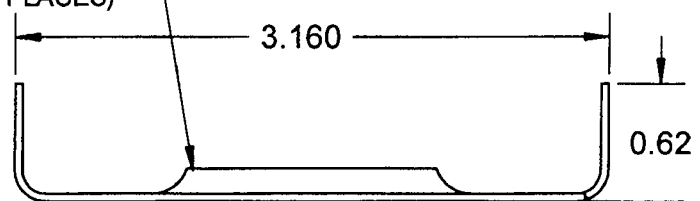


FLANGE AFTER TOWARDS SIDE  
SHOWN USING DT8174 (3 PLACES)

Ø 0.129 (TYP, 12 PLACES)

**RELEASED**

*06.06.20*



**BEND DETAIL**

**D3065-3 STEP SPACER**

- 1) MATERIAL: 2024-T3 (QQ-A-250/4)  
0.040 THICK (REF DART SPEC. M2024T3S.040)
- 2) FINISH: ACID ETCH & ALODINE PER DART QSI 005 4.1
- 3) PART IS SYMMETRIC ABOUT CENTERLINE
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.010
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 6) ALL DIMENSIONS ARE IN INCHES

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. *35616*

COPYRIGHT © 2002 BY DART AEROSPACE LTD.

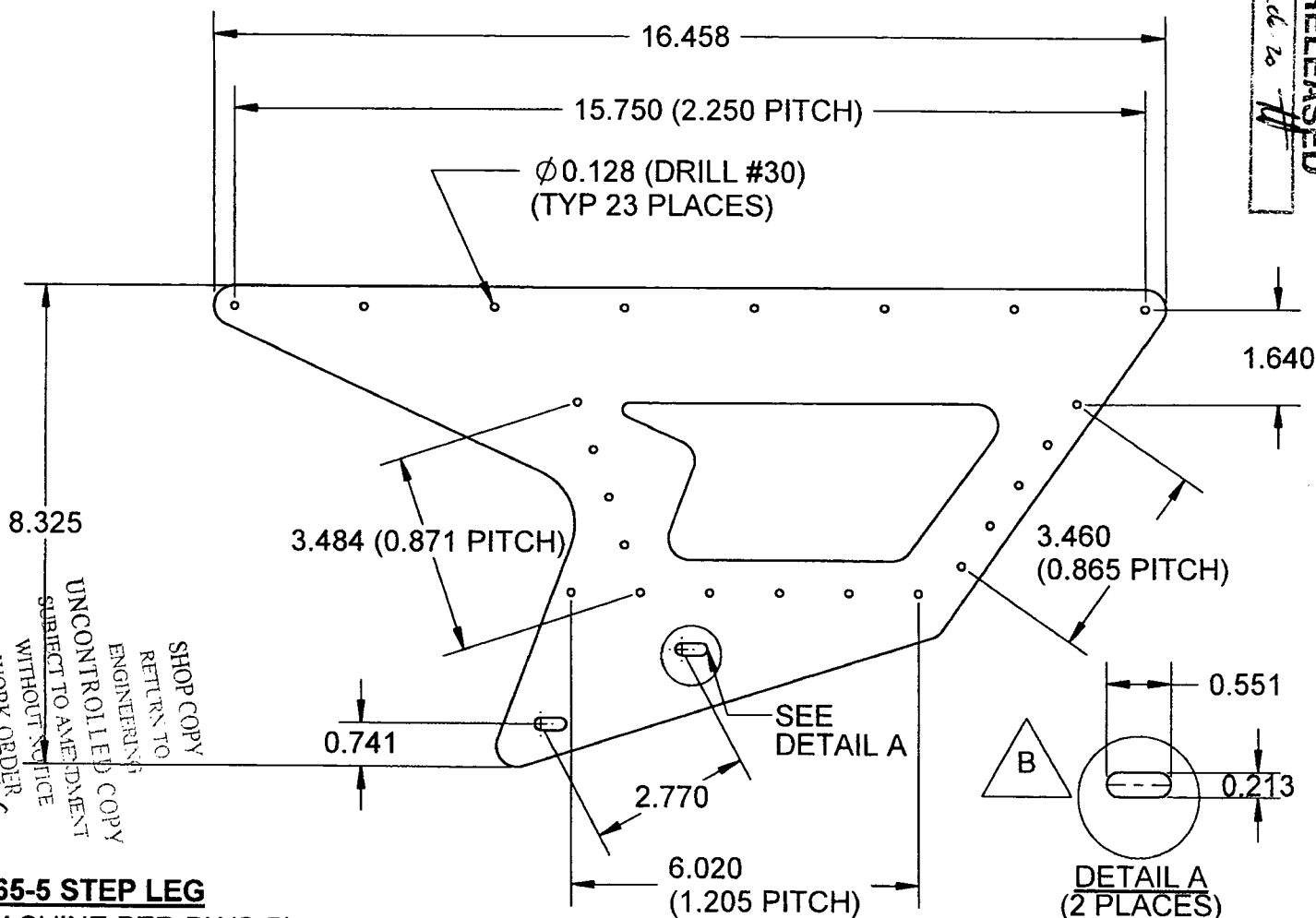
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.



**DART**

DESIGN	<i>CP</i>	DRAWN BY	<i>CB</i>	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA
CHECKED	<i>PH</i>	APPROVED	<i>PH</i>	DRAWING NO. <b>D3065</b>
DATE	06.05.23	TITLE	STEP LEG ASSEMBLY	REV. B SHEET 4 OF 5
		SCALE	1:3	

RELEASED  
06.06.20 *PH*

**D3065-5 STEP LEG**

- 1) MACHINE PER DWG FILE "D3065-5.SLDPRT"
- 2) MATERIAL: 6061-T6 (PER QQ-A-250/11 OR AMS 4025 OR AMS 4027) 0.080" THICK  
(REF DART SPEC M6061T6S.080)  
OR  
5052-H32 (PER QQ-A-250/8 OR AMS 4016) 0.080 THICK (REF DART SPEC. M5052H32S.080)
- 3) FINISH: ACID ETCH & ALODINE PER DART QSI 005 4.1
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.010
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 6) ALL DIMENSIONS ARE IN INCHES

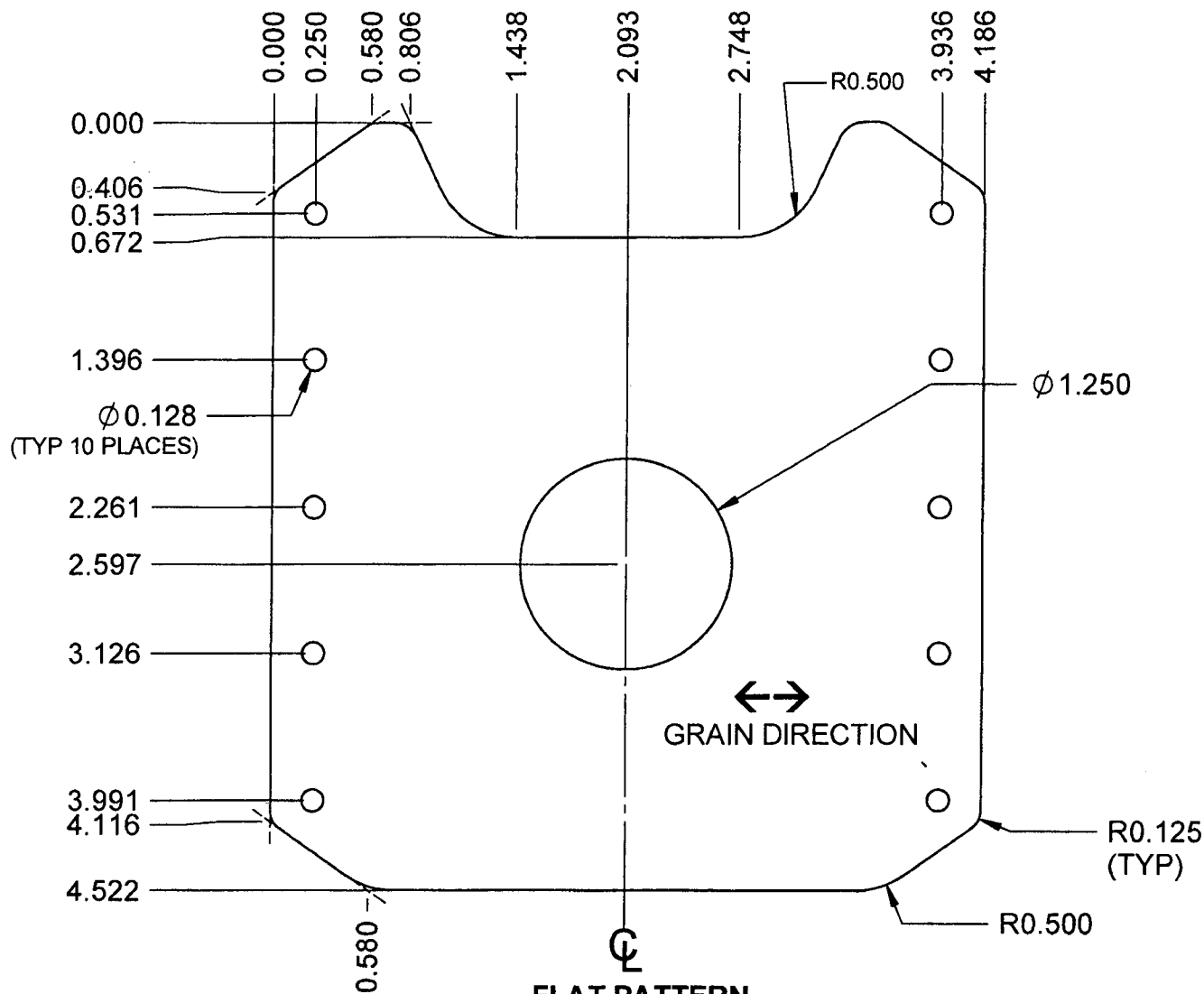
COPYRIGHT ©2002 BY DART AEROSPACE LTD.

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

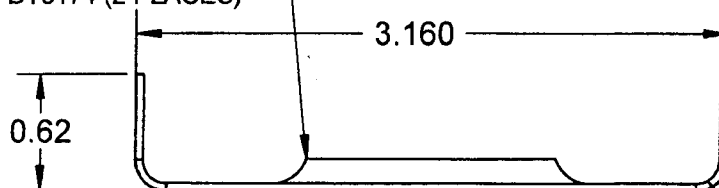
SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. *35616*



DESIGN <i>CP</i>	DRAWN BY <i>CB</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>PH</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3065	REV. B SHEET 5 OF 5
DATE 06.05.23		TITLE STEP LEG ASSEMBLY	SCALE 1:1



FLANGE AFTER BENDING TOWARDS  
SIDE SHOWN USING DT8174 (2 PLACES)



**BEND DETAIL**

**RELEASED**

*de de 20*

**D3065-7 STEP SPACER**

- 1) MATERIAL: 2024-T3 (PER QQ-A-250/4) 0.040 THICK (REF DART SPEC. M2024T3S:040)
- 2) FINISH: ACID ETCH & ALODINE PER DART QSI 005 4.1
- 3) PART IS SYMMETRIC ABOUT CENTERLINE
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.010
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 6) ALL DIMENSIONS ARE IN INCHES

SHOP COPY  
ENGINEERING  
CONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. *35616*

COPYRIGHT © 2002 BY DART AEROSPACE LTD.

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.



180 AVENUE LABROSSE  
POINTE-CLAIRE, QUÉ., CANADA H9R 1A1  
TÉL.: (514) 630-4877 - FAX: (514) 630-4849



# BON DE LIVRAISON - SHIPPING MEMO

DATE DE LIVRAISON SHIPPING DATE	N° BON DE LIVRAISON SHIPPING MEMO NO
2007/12/14	0381189


GFI est une division de Thomas & Betts Fabrication Inc. / GFI is a division of Thomas & Betts Manufacturing Inc.

ENVOI À / SOLD TO

EXPÉDIÉ À / SHIPPED TO

DART AEROSPACE LTD  
1270 ABERDEEN ST.  
HAWKESBURY, ON, K6A 1K7

DART AEROSPACE LTD  
1270 ABERDEEN ST.  
HAWKESBURY, ON, K6A 1K7

CODE DE CLIENT CUSTOMER CODE	N° DE CONTRAT JOB NO.	N° COMMANDE PO NO.	VIA SHIP VIA
DART GFI-0299	J0171922	PO00005022	
QUANTITÉ QUANTITY	VOTRE N° DE PIÈCE YOUR PART NO.	DESCRIPTION	
250	D30657 	STEP SPACER CERTIFICATE OF CONFORMANCE REQ	

TOUTES LES RÉCLAMATIONS DOIVENT ÊTRE FAITES EN DEDANS DE 5 JOURS DE LA RÉCEPTION.  
ALL CLAIMS MUST BE MADE WITHIN 5 DAYS OF RECEIPT OF GOODS.

RECU PAR / RECEIVED BY

**CERTIFICATE OF COMPLIANCE  
CERTIFICAT DE CONFORMITE**



Membre de / A Member of **Thomas & Betts**

180 LABROSSE AVENUE  
POINTE CLAIRE, QC  
H9R 1A1

**DART AEROSPACE LTD**  
1270 ABERDEEN ST.  
HAWKESBURY, ON K6A 1K7

CERTIFICATE NO. 2 OUR JOB NO J0171922 SHIPPING MEMO 0381189  
ITEM QUANTITY PURCHASE ORDER PART NUMBER REV NAME DWG ISSUE  
250 PCS PO00005022 D30651 B STEP SPACER B  
MATERIAL SUPPLIED BY MAT. REL. NO.  
AL 2024-T3 (QQ-A-250/4) SAMUEL / KAISER ALUMINUM H/N # 413490A4

	PROCESS	PROCESSOR	RELEASE NOTE #
1	FIRST ARTICLE INSPECTION REPORT ON FILE	GFI	CONFORMS
2			
3			
4			
5			
6			
7			
8			
9			

WE HEREBY CERTIFY ALL THE PARTS COVERED BY THIS CERTIFICATE HAVE BEEN MANUFACTURED FROM MATERIAL SUPPLIED ON RELEASE NOTE SHOWN ABOVE AND THAT ALL PARTS HAVE BEEN INDIVIDUALLY INSPECTED AND CONFORM TO THE DRAWINGS AND PURCHASE ORDER REFERENCED ABOVE.

DATE 14 DECEMBER 2007

G.F.I. Q.C. REP. Dallen Gold



Programme d'Assurance Qualité Enregistré / Registered Q.A. Program  
ISO 9001:2000 AS9100

### LETTRÉ DE CONFORMITÉ - LETTER OF COMPLIANCE

Date: 20 NOVEMBRE 2007

**Company Name:** G.F.I. Division of Thomas & Betts limited  
**Address:** 180 avenue Labrosse  
**City:** Pointe Claire, Qué.  
**Zip Code:** H9R 1A1

**# du client:** 72573 **# de commande SSMQ:** 873720  
**Customer's order #:** **SSMQ's Order #:**

La présente est pour certifier que le matériel détaillé ci-dessous est conforme aux exigences de votre commande et des normes du grade tel que décrit:

The following is to certify that the material listed below meets your order requirements and grade standards as described:

Notre/Our Item #	# de pièces/ # of pieces	Épaisseur/Grandeur Guage/Size	Alliage/Trempe Alloy/Temper	Spécification / Specification	Lot/Heat
1	5	.040" X 48" X 144"	2024 T3	AMS-QQ-A-250/4	413490A4

Bien à vous,  
Yours truly,



*Michael Griffiths*

Commis à l'administration.  
Administration Clerk.

<b>SHIP TO:</b> SAMUEL MISSISSAUGA 2360 DIXIE ROAD MISSISSAUGA, ON, CA L4Y1Z7
<b>SOLD TO:</b> SAMUEL MISSISSAUGA 2360 DIXIE ROAD MISSISSAUGA, ON, CA L4Y1Z7

**KAISER ALUMINUM**  
 Trentwood Works - Spokane, WA 99215  
 Phone: (800) 367-2586

## CERTIFIED TEST REPORT

Serial Number  
 4107888

CUSTOMER PO NUMBER: N20042	WORK PACKAGE:	CUSTOMER PART NUMBER:	SHIP RUN/LOAD ID: 101068/16	GOV'T CONTRACT NUMBER:		
KAISER ORDER NO: 1055568	LINE ITEM: 9	SHIP DATE: 10-SEP-2007	ALLOY: 2024	CLAD: BARE	TEMPER: T3	PRODUCT DESCRIPTION: MILL FINISH_COIL
WEIGHT SHIPPED: 4385 LB	QUANTITY: 1 PCS EST.	B/L NUMBER: 2014374	GAUGE: 0.0400 IN	WIDTH: 48.000 IN	LENGTH: 0.000 IN	

### Certified Specifications

AMS 4037/RevN  
 CMMP 019/RevD

AMS-QQ-A-250/4/RevA  
 CMMP 025/RevR

ASTM B 209/Rev06

Test Code: 1504

### Test Results

Lot: 413490A4    Cast 392    Drop 05    Ingot 3

(ASTM E8/B557)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T3	LT / 2 (Min:Max)	68.4 : 69.0 (472 : 476)	47.5 : 47.9 (328 : 330)	16.6 : 17.7

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.10	0.22	4.6	0.54	1.3	0.02	0.21	0.01	0.01	0.01	TOT 0.03

### ALLOY LIMITS

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER	MAX
2024 MIN	0.00	0.00	3.8	0.30	1.2	0.00	0.00	0.00	0.00	0.00	EACH	0.05
MAX	0.50	0.50	4.9	0.9	1.8	0.10	0.25	0.15	0.05	0.05	TOT	0.15

Aluminum Remainder

### CERTIFICATION

KAISER ALUMINUM FABRICATED PRODUCTS, LLC (KAISER) HEREBY CERTIFIES THAT METAL SHIPPED UNDER THIS ORDER WAS MELTED AND MANUFACTURED IN THE U.S.A. AND HAS BEEN INSPECTED, TESTED, AND FOUND IN CONFORMANCE WITH THE REQUIREMENTS OF THE APPLICABLE SPECIFICATIONS AS INDICATED HEREIN. ALL METAL WHICH IS SOLUTION HEAT-TREATED COMPLIES WITH AMS 2772. ANY WARRANTY IS LIMITED TO THAT SHOWN ON KAISER'S STANDARD GENERAL TERMS AND CONDITIONS OF SALE. TEST REPORTS ARE ON FILE, SUBJECT TO EXAMINATION. TEST REPORTS SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF KAISER ALUMINUM FABRICATED PRODUCTS, LLC LABORATORY. THE RECORDING OF FALSE, FICTITIOUS, OR FRAUDULANT STATEMENTS OR ENTRIES ON THE CERTIFICATE MAY BE PUNISHED AS A FELONY UNDER FEDERAL LAW. ISO-9001:2000 CERTIFIED

BILL POYNOR, LABORATORIES SUPERVISOR

*Bill Poy*